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U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

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## TUNGSTEN IN OCTOBER 1996

Based upon net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from hydrogen reduced metal powder, the U.S. industrial tungsten activity for October 1996 increased about 21% compared with that of September 1996, according to the U.S. Geological Survey. U.S. industrial tungsten activity for the first 10 months of 1996 was identical to that of the same period of 1995. Reported consumption of tungsten in all end-use products through October 1996 was unchanged compared with that through the same period of 1995.

September 1996 trade data are included in this issue. Trade data for October 1996 will appear in a subsequent issue.

The combined wolframite and scheelite prices from Metal Bulletin were:

Low: \$40/mtu  $\text{WO}_3$  (\$36.29/stu  $\text{WO}_3$ ), November 1-30, 1996

High: \$50/mtu  $\text{WO}_3$  (\$45.36/stu  $\text{WO}_3$ ), November 1-30, 1996

### Update

Russia's Lermontov Mining Company resumed tungsten concentrate output. The Lermontov Mine produced only 1,000 metric tons of tungsten concentrate in the first 6 months of 1996 before stopping production. In the first 9 months of 1995, Lermontov Mine produced 3,000 metric tons of tungsten.<sup>1</sup>

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<sup>1</sup>Platt's Metals Week. Dec. 2, 1996, p. 5.

TABLE 1  
U.S. SALIENT TUNGSTEN STATISTICS 1/

(Metric tons, tungsten content)

Period	Concentrate			Reported scrap consumption	Intermediate products		
	Reported consumption	Imports for consumption	Stocks, end of period 2/		Net produc- tion 3/	Reported consumption 4/	Stocks, end of period 5/
1995: p/ January-December	6,320	4,180	631	2,350	8,190	11,900	1,290
1996:							
January	479	310	486	261	718	993	1,220
February	475	162	438	186	933	1,000	1,360
March	504	155	559	223	845	957	1,440
April	580	148	694	236	787	973	1,510
May	415	403	654	200	303	1,070	1,550
June	551	365	721	199	473	947	1,560
July	506	383	633	273	866	935	1,780
August	415	183	695	250	525	1,110	1,640
September	422	521	601	134	524 r/	836	1,550
October	342	NA	803	207	633	883	1,490
Total	4,690	2,630	XX	2,170	6,610	9,700	XX

p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Reported by consumers.

3/ Net production of tungsten metal powder, tungsten carbide powder, chemicals, and other products.

4/ Includes data on tungsten carbide powder from secondary sources.

5/ Reported by producers.

TABLE 2  
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF  
AMMONIUM PARATUNGSTATE, BY MONTH 1/

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period 2/
1995: p/ January-December	2,580 3/	7,690	338
1996:			
January	565	598	370
February	W	630	366
March	556	782	357
April	W	742	319
May	W	619	299
June	W	531	391
July	677	639	W
August	592	673	576
September	551	572	558
October	539	866	489
Total	3,480	6,650	XX

p/ Preliminary. W Withheld to avoid disclosing company proprietary data.  
XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Producers and consumers.

3/ Excludes seven months of withheld data.

TABLE 3  
U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS 1/

(Metric tons, tungsten content)

Product	Net production 2/			Stocks at end of period	
	1996			1996	
	1995 p/	October	Year to date	1995 p/	October
Metal powder	2,910	267	3,330	818	939
Tungsten carbide powder (made from metal powder)	5,280	366	3,270	348	457
Cast and crystalline carbide powder; other	W	--	--	W	W
Chemicals	W	W	W	126	97
Total	8,190	633	6,610	1,290	1,490

p/ Preliminary. W Withheld to avoid disclosing company proprietary data.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Gross production less quantity used to make other products in table.

TABLE 4  
U.S. REPORTED CONSUMPTION, BY END USE, AND CONSUMER STOCKS OF TUNGSTEN PRODUCTS IN OCTOBER 1996 1/

(Metric tons, tungsten content)

End use	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Scheelite (natural, synthetic)	Tungsten scrap 2/	Other tungsten materials 3/	Total	Total year to date
Steel:								
Stainless and heat-resisting	W	--	W	--	W	--	W	W
Alloy	4	--	--	--	--	--	4	19
Tool	W	--	--	--	--	--	W	139
Total	4	--	W	--	W	--	4	158
Superalloys	--	W	2	--	14	W	16	180
Alloys (excludes steels and superalloys):								
Cutting and wear-resistant materials	--	W	535	--	W	1	535	5560
Other alloys 4/	--	W	W	--	W	--	W	1
Mill products made from metal powder	--	W	--	--	--	--	W	360
Chemical and ceramic uses	--	W	W	--	--	W	W	W
Miscellaneous and unspecified	14	32	275	--	W	7	328	3440
Total	18	32	812 5/	--	14	7	883	XX
Total consumption, year to date	265	572	8510 5/	--	148	207	--	9700
Stocks, October 31, 1996	18	48	432 5/	1	27	13	539	XX

W Withheld to avoid disclosing company proprietary data. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Does not include that used in making primary tungsten products.

3/ Includes tungsten chemicals.

4/ Includes welding and hard-facing rods and materials and nonferrous alloys.

5/ Based on reported consumption plus information from secondary sources; includes estimates.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY 1/

(Metric tons, tungsten content)

Period and country of origin	Con- cen- trate	Ammonium tungstates	Ferro- tungsten	Lumps, grains, powders	Tungsten carbide	Other e/ 2/	Total	Total year to date
1995:								
Total	4,180	1,290	652	312	476	3,260	10,200	XX
1996:								
July	383	130	43	12	22	381	972	XX
August	183	232	29	68	29	120	661	XX
September:								
Australia	--	--	--	--	--	--	--	3
Austria	--	--	--	--	--	3	3	17
Belgium	--	--	--	(3/)	--	--	(3/)	3
Bolivia	155	--	--	--	--	--	155	467
Canada	--	--	--	3	21	(3/)	24	59
China	--	28	15	2	11	190	246	3,170
Czech Republic	--	--	--	--	--	--	--	9
France	--	--	--	22	--	(3/)	22	22
Germany	--	--	--	2	20	(3/)	22	172
Hong Kong	--	--	--	--	(3/)	1	1	195
Hungary	--	--	--	--	--	(3/)	(3/)	5
Israel	--	--	--	--	--	1	1	8
Japan	--	--	--	2	--	2	4	61
Kazakstan	--	--	--	--	--	--	--	126
Korea, Republic of	--	--	--	--	--	(3/)	(3/)	6
Mexico	--	--	--	--	--	(3/)	(3/)	46
Netherlands	120	--	--	--	--	(3/)	120	208
Peru	9	--	--	--	--	--	9	327
Portugal	58	--	--	--	--	--	58	462
Russia	169	--	15	--	--	--	184	1,090
Sweden	--	--	--	7	--	--	7	48
Switzerland	--	--	--	--	3	1	4	6
Thailand	11	--	--	--	--	--	11	22
United Kingdom	--	--	--	8	(3/)	(3/)	8	404
Uzbekistan	--	--	--	--	--	--	--	30
Total	521	28	30	47	55	200	881	XX
Total, year to date	2,630	1,110	412	350	269	2,190	XX	6,960

e/ Tungsten content estimated in part. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes calcium, potassium, and sodium tungstates, mixtures and materials in chief value tungsten, tungsten oxide, tungstic acid, unwrought ingots and shot, other unwrought tungsten and materials, wrought tungsten, and other tungsten compounds.

3/ Less than 1/2 unit.

Note: Imports of waste and scrap in September 1996 totaled 84 metric tons, tungsten content.

Source: Bureau of the Census.

TABLE 6  
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY 1/

(Metric tons, tungsten content)

Period and country of destination	Con- cen- trate	Ammonium tungstates	Metal powder e/	Tungsten carbide	Other e/ 2/	Total	Total year to date
1995:							
Total	5	238	484	1,670	369	2,760	XX
1996:							
July	1	--	24	78	19	120	XX
August	(3/)	--	12	113	19	140	XX
September:							
Argentina	--	--	--	(3/)	--	(3/)	3
Australia	--	--	--	(3/)	(3/)	(3/)	12
Austria	--	--	--	4	--	4	25
Bahamas	--	--	--	--	--	--	1
Belgium	--	19	--	1	(3/)	20	28
Brazil	--	--	(3/)	(3/)	--	(3/)	7
Canada	--	--	4	26	2	32	324
China	--	--	--	--	(3/)	(3/)	23
Denmark	--	--	--	(3/)	--	(3/)	3
France	--	--	--	4	(3/)	5	61
Germany	--	--	11	18	1	30	347
Guatemala	--	--	--	--	--	--	1
Honduras	--	--	--	--	--	--	18
Hong Kong	--	--	--	--	(3/)	(3/)	8
India	--	--	--	--	3	3	14
Ireland	--	--	--	(3/)	--	(3/)	3
Israel	--	--	--	1	(3/)	1	46
Italy	--	--	(3/)	16	(3/)	16	103
Japan	--	--	--	1	2	3	110
Korea, Republic of	--	--	--	(3/)	(3/)	(3/)	10
Luxembourg	--	--	--	1	--	1	12
Mexico	--	--	--	(3/)	2	2	30
Netherlands	--	--	--	3	(3/)	3	11
Portugal	--	--	--	--	--	--	2
Saudi Arabia	--	--	--	--	--	--	1
Singapore	--	--	12	4	(3/)	16	31
South Africa	--	--	--	7	(3/)	7	22
Spain	--	--	--	--	1	1	8
Sweden	--	--	4	(3/)	(3/)	4	78
Switzerland	--	--	--	1	(3/)	1	7
Taiwan	--	--	--	1	2	3	37
United Kingdom	--	--	--	(3/)	(3/)	1	118
Venezuela	--	--	--	(3/)	--	(3/)	2
Vietnam	--	--	--	--	--	--	2
Total	--	19	31	90	15	155	XX
Total, year to date	17	85	206	986	219	XX	1,510

e/ Tungsten content estimated in part. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes calcium, potassium, and sodium tungstates, mixtures and materials in chief value tungsten, tungstic acid, unwrought ingots and shot, other unwrought tungsten and materials, wrought tungsten, and other tungsten compounds.

3/ Less than 1/2 unit.

Note: Exports of waste and scrap in September 1996 totaled 100 metric tons, tungsten content.

Source: Bureau of the Census.